GREEN SPRING GARDENS PARK

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PLANT INFORMATION SHEET

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GARDEN MAINTENANCE

A. Watering - One inch of water per week is needed for most plants during the growing season in the Washington, D.C. area - drought tolerant or water-wise plants are a notable exception. Water deeply rather than sprinkling lightly. For example, at Green Spring we generally put water on a given area (with an oscillating sprinkler or an impact sprinkler) for one to two hours at a time when rainfall is inadequate, and even longer in some wooded areas during prolonged dry periods.

B. Weeding - Hand weeding is essential; tools such as dandelion forks, hand trowels, and swan neck hoes are useful. Spot treatments with glyphosate (a herbicide), especially for perennial weeds, can also be used. Glyphosate is marketed under many names including Roundup and Razor; it is moderately toxic to humans – follow label directions. To identify weeds, excellent publications are *Weeds of the Northeast* by Richard H. Uva, Joseph C. Neal, and Joseph M. DiTomaso, and *Plant Invaders of Mid-Atlantic Natural Areas* by the National Park Service and the U.S. Fish and Wildlife Service.

C. Mulching - Mulches reduce evaporation of soil moisture, reduce weed populations, and gradually enrich the soil. Apply to a depth of 2"-3". Mulches are commonly applied after planting, after spring cleanup, or in the fall. Do not mulch too closely to the crowns (plant base) or crown rot can occur. Mulching materials include leaf mulch, pine bark, shredded hardwood bark, and grass clippings (don't use grass clippings if the lawn was recently treated with herbicides). Mulch as needed, which is yearly in some areas or seldom in woodland areas because leaves provide a natural mulch.

Special tip for plants that need excellent drainage and air circulation, such as many rock garden and Mediterranean (e.g., lavender) plants: these plants can be mulched with a layer of pea gravel.

Mulching Tools: Manure or hay fork (4 to 6 tines) vs. scoop fork (10 tines) - a scoop fork holds more mulch but can be too heavy for many people. Aluminum scoop shovels are also useful for mulching.

D. Fertilizing

Most herbaceous plants - Fertilize perennials and biennials lightly in the spring as shoots emerge if a plant is showing signs of a nutrient deficiency (e.g., signs of a nitrogen deficiency - older foliage is yellow and new foliage is green). Good fertilizers to use include organic fertilizers (e.g., Plant-tone [5-3-3]) and slow-release inorganic fertilizers (e.g., 50% slow-release 10-6-4). These fertilizers are much better for our natural environment than 100% quick-release inorganic fertilizers. A 10-6-4 fertilizer is 10% nitrogen, 6% phosphate

(indicates phosphorus level- phosphate is 44% phosphorus), and 4% potash (indicates potassium level - potash is 83% potassium). Too much nitrogen encourages rank growth, flowering may be reduced, and pest problems can increase. I usually apply granular fertilizers by hand using rubber or plastic gloves. Water granular fertilizers in well after application. **Most plants need little or no fertilization when shredded leaves are used as a mulch - it breaks down rapidly enough to supply needed nutrients to plants.**

Annuals, tender perennials, tender bulbs, and vegetable transplants can be lightly fertilized with the above fertilizers or with a liquid fertilizer (e.g., 20-20-20) after planting if needed. Established herbaceous plants can also be fertilized with liquid fertilizers, but liquid fertilizers are more expensive to use than granular fertilizers and more prone to leaching into groundwater.

Special Tip for Certain Woodland Plants: Gypsum (calcium sulfate) can be applied to calcium-loving woodland plants (e.g., maidenhair fern [*Adiantum pedatum*] and black snakeroot [*Cimicifuga racemosa*]) on an occasional basis. Lime can also be used.

Bulbs - Tulips and miscellaneous bulbs prefer a fertilizer with high levels of nitrogen (e.g., 10-6-4) while daffodils prefer a fertilizer with a low nitrogen analysis and a higher phosphorus and potassium analysis (e.g., 5-10-20 slow-release fertilizer). You can fertilize your bulb plantings lightly in the fall (or in the spring when leaves are emerging), but if your soil is fertile this is seldom necessary. We rarely fertilize bulb planting at Green Spring because of our extensive use of leaf mulch.

Trees and shrubs - These plants prefer a fertilizer with more nitrogen (e.g., 10-6-4) and are best fertilized if needed in early to mid spring as plants start active growth. **Most woody plants seldom need fertilization due to their extensive root systems.** Roses are best fertilized in early April after spring pruning; at Green Spring we only fertilize less vigorous roses.

Special Tip: Get a soil test done about every 4 years for lime and fertilizer recommendations. The greatest benefit to plants, in terms of nutrient levels, is from proper pH values and adequate nitrogen levels.

E. Staking - This is necessary for some tall plants, such as many dahlias cultivars. Other conditions that may cause plants to need staking include overfertilization, too much shade, and overcrowding (due to plant growth over time or planting too close together). It is easiest to insert stakes early when growth is still low. Stakes should be approximately 2/3's as tall as the ultimate height. Tie loosely at intervals using green or natural colored twine. Using a figure 8 tie is helpful. In addition, cutting back certain plants early in the growing season can reduce staking needs. We personally do not do much staking or cutting back plants to reduce staking needs at Green Spring.

Materials to use for staking include:
* Brush stakes or pea sticks - twiggy brush
* Bamboo stakes - ones that are dyed green are excellent
* Metal or wooden stakes
* Wire supports

F. Deadheading – You can cut off or remove spent blossoms on certain plants to improve their appearance; some plants also will rebloom when deadheaded. If using pruning shears, use a scissors-type shear. Hedge clippers or loppers can be used on some plants. Some plants should not be deadheaded due to their long season of interest, such as autumn joy sedum. You also may not want to deadhead plants that attract seed-eating birds, such as columbines. If you are trying to keep tulips more than one growing season, deadhead them.

G. Turf edging beds - Can be done with a gasoline powered turf edger or by hand with a lawn edging knife and a flat nose spade (make a V-shaped shallow area at the front of the bed). Other attractive edging materials include stone, brick, steel edging, logs, and walkways.

H. Cutting back bulb foliage - Do not cut back bulb foliage until it turns yellow and falls over.

I. Fall cleanup - Dig up tender perennials (e.g., scented geraniums) or take cuttings before the first hard frost if you want to overwinter plants. Remove tender annuals and tender perennials that died after the first hard frost. Some borderline hardy bulbs can be dug up before the first hard frost (e.g., *Hedychium* or ginger lilies) and potted for the winter, while others can be dug up after the first hard frost (e.g., cannas), washed off, and stored indoors in a cool, dark place in plastic bags with vermiculite in them. Rake up excess leaves, especially on lawn areas. Do not cut back the foliage of certain plants that may be cold sensitive until mid to late March (e.g., Powis Castle artemisia). Cut back ornamental grasses in late winter because their dried foliage adds interest to the winter garden. Dying, non-evergreen foliage of hardy perennials can be cut back to within 6" of the ground. However, don't forget to be friendly to the environment: compost your garden debris and leaves, and leave many perennials standing throughout the winter to provide cover for birds and other overwintering wildlife!

J. Winter protection - This is needed for newly planted perennials or marginally hardy perennials. Apply protection between Thanksgiving and Christmas. Evergreen boughs are the best material to use, although we usually end up using wood chips or shredded leaves because they are readily available. Place 6" of mulch on borderline hardy bulbs like × *Amarcrinum, Crinum*, *Hedychium*, and *Canna*.

K. Spring cleanup - Rake off excess leaves that have accumulated and remove mulch used for winter protection before plants start actively growing in the spring. In woodland gardens, however, you only need to rake leaves off plants that are sensitive to rot when leaves remain on their crowns (e.g., cardinal flower and creeping phlox). Cut back remaining dried foliage. Rose pruning is done in late March or early April, although dead wood can be removed from woody plants at any time. Roses and other woody plants that bloom only on old wood (e.g., most old garden roses and *Hydrangea macrophylla*) should only be pruned lightly at this time - any serious pruning should be done after the first flush of bloom. Woody plants that bloom on new wood (e.g., butterfly bush and most modern shrub roses) can be cut back as needed in early spring. For detailed pruning information, see *The Pruning Book* by Lee Reich.

L. Division - Division is used to rejuvenate plants, to curtail their spread, and to increase the number of plants. Division is usually done in the spring or early fall (I prefer spring; most ornamental grasses, for example, are best done in the spring). The need for division is most evident when the center of a plant dies out or growth becomes leggy. Shovels, knives, Japanese farmer's weeders, spading forks, an ax, or a sledgehammer used with a wedge or an ax can be used. Discard woody pieces.

M. Controlling diseases and pests

1. Aphids, other insects, and mites: For aphid control, it is best for our environment

to wait for predators, such as ladybird beetles, to take care of the problem. Most of the time, nature will keep problems with pests to a low level – tolerating some damage is good for our environment, especially if you want to have a backyard wildlife habitat garden. *Organic Gardening* and other publications by Rodale Press are helpful to organic gardeners.

When controlling pests think IPM (integrated pest management)! If spraying is needed, insecticidal soap is a useful organic pesticide (apply with a hand-held compressed sprayer). Horticultural oil is also effective on some pests, especially on woody plants. Neem oil is a naturally derived pesticide but it is toxic to bees and must be used when bees are not active (generally early in the morning or late in the day). **When using any pesticides, read and follow the label, and use safety precautions.** See *Landscape IPM. Guidelines for Integrated Pest Management of Insect and Mite Pests on Landscape Trees and Shrubs* (Bulletin 350, Cooperative Extension Service, University of Maryland; prepared by John A. Davidson and Michael J. Raupp) for detailed information. Another excellent publication is *Pests and Diseases of Herbaceous Perennials. The Biological Approach* by Stanton Gill, David L. Clement, and Ethel Dutky (all Maryland Cooperative Extension Service employees).

2. **Diseases** (see last book mentioned above for herbaceous perennial diseases):
   a. **Black spot** – Many roses are susceptible to this disease and need to be sprayed every 2 weeks or less with a rotation of approved fungicides from early to mid April (after spring pruning is finished) through early October. Spraying can be discontinued in the summer when temperatures rise above 90 degrees F and during periods of dry weather. Sulfur can be sprayed instead of the above fungicides when the weather is cool, but burns foliage in hot weather. **The best alternative is to grow disease resistant roses so you don't have to spray, which is what Green Spring is now doing.**
   b. **Powdery mildew** - Can use fungicides, but the best alternative is to grow disease resistant plants.
   c. **Root rot** - Dig out contaminated soil and replace it with fresh soil with well rotted organic matter added to it. It is very important to grow plants that are tolerant of the cultural conditions of the site. Also, rotate plantings between grasses and broadleaf plants in problem areas (crop rotation).
   d. **Viruses** - Remove virus-infected plants and discard. Yellow discoloration of the leaves in irregular patterns (mosaics, ringspots, and mottles) is a common symptom.

3. **Other animal problems**:
   a. **Deer** - Cut up bar soap around plants that are getting eaten or hang soap from trees that are getting eaten (only effective if deer do not regularly feed in an area). If damage does not stop, put up electric fencing, a deer fence that is at least 10 feet tall (woven wire type), or avoid growing plants that are commonly damaged. Dogs are also a deer deterrent.
   b. **Slugs** - Use baits, hand-picking, or beer in bowls (the least effective).
   c. **Voles and other small mammals** - Use cats, rodenticides (for voles and rats), traps, and cages around plants (e.g., for rabbits) to control. Rodenticides can affect non-target organisms, so try other alternatives first.